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	Examiner Name	Thu Thao Havan	
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Patent

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: OTERO et al.

Application Serial No.: 09/872,687

Filing Date: May 31, 2001

For: COMPUTERIZED INTERFACE FOR
CONSTRUCTING AND
EXECUTING COMPUTERIZED
TRANSACTION PROCESSES AND
PROGRAMS

Group Art Unit: 3624

Examiner: Thu Thao Havan

APPEAL BRIEF

Attorney Docket No.: G08.053

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Dated: August 17, 2006

By

Edith Martin

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellants hereby appeal to the Board of Patent Appeals and Interferences from the decision of the Examiner in the Final Office Action mailed January 11, 2006 (the "Final Office Action"), rejecting claims 1, 5, 6, 11, 12, 14 and 16-27.

REAL PARTY IN INTEREST

The present application is assigned to GOLDMAN, SACHS & CO., 85 Broad Street, New York, New York 10004, U.S.A.

RELATED APPEALS AND INTERFERENCES

No other appeals or interferences are known to Appellants, Appellants' legal representative, or assignee, which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims 1, 5, 6, 11, 12, 14 and 16-27 are pending in this application. All pending claims stand rejected and are now being appealed.

Claims 2-4, 7-10, 13 and 15 have previously been canceled.

STATUS OF AMENDMENTS

No amendments are pending or were filed after the Final Office Action.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is concerned with modification of computer software for trading on financial markets (specification, page 4, lines 7-17). More specifically, the present invention provides for a user interface that allows the user to change a trading algorithm by changing a mapping between an event and an action to be taken in connection with the trading algorithm (specification, page 19, line 17 to page 20, line 6; FIGS. 8, 9 and 16-18).

Claim 1

Claim 1 is directed to a computerized trading apparatus which includes a logic engine which, in turn, includes an algorithm for implementing a trading strategy (FIG. 1; specification,

page 4, line 28 to page 5, line 3). The apparatus also includes an interface which includes a first sub-interface and a second sub-interface (FIGS. 4, 5, 11A, 11B, 13-20; specification, page 7, lines 5-10; page 16, line 11 to page 17, line 8).

The first sub-interface allows a user to modify the trading strategy algorithm by changing a mapping between an event and an action (FIGS. 14-18; specification, page 18, line 28 to page 20, line 21). The second sub-interface allows the user to review details of orders executed by the logic engine (FIG. 13; specification, page 18, lines 11-25). The interface allows the user to navigate among the first and second sub-interfaces (FIG. 12, references numerals T1, T2, T3; specification, page 17, lines 11-20).

Claim 12

Claim 12 is an independent method claim argued below together with claim 1. Claim 12 recites providing a logic engine which includes an algorithm for implementing a trading strategy (FIG. 1; specification, page 4, line 28 to page 5, line 3). Claim 12 further recites providing an interface that includes a first sub-interface and a second sub-interface (FIGS. 4, 5, 11A, 11B, 13-20; specification, page 7, lines 5-10; page 16, line 11 to page 17, line 8). In addition, claim 12 recites using the first sub-interface to modify the trading strategy algorithm by changing a mapping between an event and an action (FIGS. 14-18; specification, page 18, line 28 to page 20, line 21).

Still further, claim 12 recites processing a trade using the logic engine with the modified algorithm (FIGS. 8 and 9; specification, page 10, lines 19-21), and using the second sub-interface to review details of orders executed by the logic engine (FIG. 13; specification, page 18, lines 11-24).

Claim 14

Claim 14 is an independent claim and is argued below together with claims 1 and 12. Claim 14 is directed to an interface used in a computerized trading system. The interface includes a first sub-interface for modifying an algorithm by changing a mapping between an event and an action (FIGS. 14-18; specification, page 18, line 28 to page 20, line 21). The algorithm is used in the computerized trading system to implement a trading strategy (FIG. 1; specification, page 4, line 28 to page 5, line 3).

The interface also includes a second sub-interface for reviewing details of orders executed by the computerized trading system (FIG. 13; specification, page 18, lines 11-25). The interface allows a user to navigate among the first and second sub-interfaces (FIG. 12, references numerals T1, T2, T3; specification, page 17, lines 11-20).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

(1) Claims 1, 5, 6, 11, 12, 14 and 16-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Magill (U.S. published patent application 2004/0143542) in view of Kane (U.S. Patent No. 6,317,728).

ARGUMENT

I. Applicable Law

All of the issues in this appeal are related to rejections under 35 U.S.C. § 103(a). In these rejections, the Examiner found the claims at issue to be obvious in view of a combination of references.

The law governing application of 35 U.S.C. § 103(a) is set forth in general terms as follows in *In re Kotzab*, 217 F.3d 1365 (Fed.Cir. 2000):

A claimed invention is unpatentable if the differences between it and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art [citing § 103(a)].

In comparing the claimed invention with the prior art, both the claimed subject matter as a whole and the references as a whole must be considered. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143 (Fed.Cir. 1985).

The *Kotzab* case further sets out the following standards in regard to proposed combinations of references:

[T]o establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. [Citations omitted]

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. [Citation omitted] In addition, the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. [Citation omitted] The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. [Citation omitted]¹

Also, according to another point of law which is particularly relevant to this appeal, and as noted in the MPEP at § 2143.03, “[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” [Citing *In re Royka*, 490 F.2d 981 (CCPA 1974); emphasis added].

II. The pending claims are not obvious in view of the Magill and Kane references

Appellants propose that claim 1 be taken as exemplary of all of the pending claims. However, even if claim 1 is not considered patentable, there are separate grounds for patentability of certain dependent claims, as discussed below.

The fundamental error in the Examiner’s treatment of claim 1 is the Examiner’s failure to recognize that at least one limitation of claim 1 simply is not taught or suggested by the Magill and Kane references, whether considered individually or in combination. As a secondary but still significant point, the Examiner’s proposed combination of the two references is not well-motivated by any teaching or suggestion in the prior art. Before adducing evidence to support these points, appellants will first provide an overview comparison of the claimed subject matter with the references.

In its aspects that are most relevant to the issues in this appeal, claim 1 recites a user “sub-interface” that allows a user to modify a trading strategy algorithm by changing a mapping between an event and an action.

¹ 217 F.3d at 1370.

The Magill reference is generally concerned with an automated securities trading system which matches buy orders with sell orders and displays an interactive open order book (paragraph 0009). In its most pertinent aspects in relation to the present appeal, Magill describes an interface which allows a user to interact with a book of securities trading orders (see, e.g., paragraph 0057 of the reference).

The Kane reference is primarily concerned with computer software for a computer used to submit trading orders to a financial trading market. (Kane, column 1, lines 4-8 and 47-50.) Kane's software is presented as particularly suitable for day-trading. (Column 1, line 64 to column 2, line 14; column 18, lines 12-29.) A salient feature of Kane's software is its inclusion of many quasi-independent "agents", each of which is a module or section of computer logic and operates in response to a respective rule for buying or selling securities. (Column 3, lines 10-14 and 30-33; column 5, lines 5-10.) Based on "votes" from the "agents", Kane's software engages in automated trading without user input. (Column 5, lines 45-55.)

A. Not all claim limitations are disclosed in the references

In a sense, appellants would contend, the Kane reference is more pertinent to claim 1 than the Magill reference is, in that at least Kane is concerned with algorithms for implementing trading strategies. However, neither reference describes an interface to allow a user to modify a trading strategy algorithm², and both completely fail to describe modifying such an algorithm by changing a mapping between an event and an action.³

The Examiner purported to find this limitation in paragraph 0056 of Magill⁴. For convenience of reference, paragraph 0056 is reproduced below in its entirety.

The GUI allows individual users to customize their color scheme and includes the option to specify a color (which only that user sees) to designate their outstanding orders on the system.

² Kane does not appear to include disclosure of any interface whatsoever.

³ As a sidelight, appellants note that both references lack any disclosure similar to the screen shots shown in FIGS. 14-18 of the present application. These screen shots illustrate an embodiment of a sub-interface which allows for changing event-action mappings to modify a trading strategy algorithm.

⁴ The Examiner has not asserted that this limitation is to be found in the Kane reference.

It is apparent that this paragraph has nothing to do with modifying a trading strategy algorithm. Paragraph 0056 refers to a color scheme for a graphical user interface (GUI), and also describes allowing a user to specify a color in which the user's outstanding securities trading orders are to be displayed. Basically, the disclosure in this reference, to the extent it is arguably relevant, merely sets forth changing a color in a display. Appellants submit that this does not satisfy the claim limitation of changing a mapping between an event and an action.

In the final Office Action, the Examiner asserted that the "mapping" changed in Magill was between a "mouse click" event and a "color scheme" action⁵. The Examiner further asserted that the "recitation trading" need not be "given patentable weight because the recitation occurs in the preamble [of claim 1]"⁶.

Even if the Examiner were justified in likening the change of a display color scheme to changing a mapping between an event and an action (and appellants believe this is not justified), it is nevertheless clearly improper for the Examiner to disregard the claim limitation of a "trading strategy" and to consider the claim limitation of modification of a trading strategy algorithm as satisfied by Magill's disclosure of changing a display color scheme. While it is true that the term "trading" appears in the claim preamble, this same term also appears in the first limitation stated in the body of the claim. Specifically, claim 1 defines the algorithm modified with the first sub-interface as "an algorithm for implementing a trading strategy". This recitation is not in the claim preamble, and there is simply no basis for the Examiner to fail to give it patentable weight. To reiterate, the references do not disclose modifying a trading strategy algorithm by changing a mapping between an event and an action.

Since the Examiner has relied on prior art references that fail to disclose at least one limitation of claim 1, the Examiner has failed to establish a *prima facie* case of obviousness of claim 1.

⁵ See the top of page 3 of the Office Action dated January 11, 2006.

⁶ See paragraph A. on page 2 of the January 11 Office Action.

B. The Examiner's proposed combination of Magill and Kane is not supported by any suggestion to combine in the prior art

In formulating the rejection of the claims, the Examiner proposed to satisfy the claimed "logic engine" by incorporating the "intelligent agents" of Kane into Magill's trading system. The Examiner did not explain how this was to be done, given the differences between the systems disclosed in the two references. But still more important, the Examiner did not explain why the teachings of the prior art would suggest that such a combination be made.

The Examiner stated in the Office Action of September 23, 2005⁷:

Thus, it would have been obvious to one of ordinary skill in the art to implement a decision logic system as a logic engine in relation to [a] securities trading system as discloses [sic] in Kane.

What is most striking about this statement is what it does not say--it fails to articulate any benefit, motivation, purpose, reason or suggestion that the proposed combination of references should be made. Thus, even in purely formal terms, the asserted proposal to combine references is defective and does not support a *prima facie* case of obviousness.

Moreover, there are substantial reasons why one of ordinary skill in the art would be unlikely to make the proposed combination of Kane with Magill.

Magill's trading system is "automated" with respect to matching buy and sell orders, but is not automated with respect to placement of orders. Placement of orders in Magill's system appears to require user input. By contrast, Kane's system automatically generates securities trading orders without user input, and based on results of "voting" among numerous independent "intelligent agents" that are implemented as software modules and which represent competing buy or sell rules. If such intelligent agents were imported into Magill's system, there would be a drastic change in the operation of Magill's system, such that it would be a completely different system that would not achieve Magill's objective of allowing a human securities trader to interact with an open order book on a trading system⁸. It is therefore doubtful that one of ordinary skill in the art would arrive at the combination proposed by the Examiner.

⁷ At page 4, lines 1-3.

⁸ See paragraph 0007 of Magill.

* * * * *

For the reasons stated above, it is respectfully urged that the rejection of all of the pending claims should be reversed.

III. Separate Argument in Support of Claims 18, 21 and 24

Each of claims 18, 21 and 24 is a dependent claim and adds the limitation that the “first sub-interface includes an event editor interface, a condition editor interface and an action editor interface”. In purporting to read this limitation on the Magill reference, the Examiner merely referred to paragraphs 0053-0060 of the reference, without specifying any particular feature of Magill’s system as supposedly satisfying any one of the claimed event editor interface, condition editor interface and action editor interface. The only type of interface described in the cited passage in the reference is for viewing an open order book, placing orders, or canceling orders. There is nothing in the reference that corresponds in any way to the editor interfaces recited in claims 18, 21 and 24. The word “editor” does not appear in the cited passage, nor is there any discussion of any function that could be reasonably construed as “editing”. In short, the references, and particularly the Magill reference, fail to disclose or teach the limitation recited in claims 18, 21 and 24.

For these reasons, appellants respectfully submit that claims 18, 21 and 24 are patentable even if claim 1 is not found to be patentable.

IV. Separate Argument in Support of Claims 25-27

Claims 25-27 are also dependent claims and each specifies that the action to which an event is mapped in claim 1 (or 12 or 14, as the case may be) “is placement of a securities trading order”. It is believed that this limitation clearly prevents, at least as to these three claims, the Examiner’s interpretation whereby displaying of particular color is to be considered an “action”. While the Examiner is correct in stating that paragraph 0057 of Magill refers to a securities trading order, still the reference completely fails to suggest that such an order may be an action to which an event is mapped, with such mapping to be changed via a user interface.

It is submitted that even if claim 1 is not found to be patentable, claims 25-27 are patentable on grounds independent of the patentability of the independent claims.

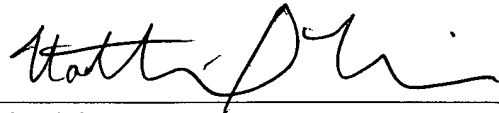
CONCLUSION

The rejections of claims 1, 5, 6, 11, 12, 14 and 16-27 are improper at least because the combination of prior art references proposed by the Examiner is not properly suggested by prior art teachings and fails to teach or suggest some elements of the claims. Therefore, appellants respectfully request that the Examiner's rejections be reversed.

As required by 37 CFR §41.37(a)(1), this Brief is filed within two months from the date of mailing of Appellants' Notice of Appeal (*i.e.*, within two months of June 23, 2006); as such, no extension of time is believed due. The requisite fee (\$500) for filing an Appeal Brief is paid herewith by credit card. However, if any additional fees are due in conjunction with this matter, the Commissioner is hereby authorized to charge them to Deposit Account 50-1852. An Appendix of claims involved in this appeal is attached hereto.

If any issues remain, or if the Examiner or the Board has any further suggestions for expediting allowance of the present application, kindly contact the undersigned using the information provided below.

Respectfully submitted,



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August 17, 2006
Date

APPENDIX A--CLAIMS

1. An apparatus for a computerized trading system comprising:
 - a logic engine comprising an algorithm for implementing a trading strategy; and
 - an interface comprising a first sub-interface and a second sub-interface, wherein:
 - said first sub-interface allows a user to modify said algorithm by changing a mapping between an event and an action;
 - said second sub-interface allows the user to review details of orders executed by the logic engine; and
 - said interface allows the user to navigate among said first and second sub-interfaces.
- 2-4. (canceled)
5. The apparatus of claim 1 wherein said interface comprises a graphical user interface.
6. The apparatus of claim 1 wherein said first sub-interface comprises a graphical user interface.
- 7-10 (canceled)
11. The apparatus of claim 1 wherein:
 - said interface further comprises a third sub-interface which allows the user to monitor operation of a server computer that executes the logic engine; and
 - said interface allows the user to navigate among said first, second and third sub-interfaces.
12. A method for computerized trading comprising:
 - providing a logic engine with an algorithm for implementing a trading strategy;
 - providing an interface that includes a first sub-interface and a second sub-interface;
 - using the first sub-interface to modify said algorithm by changing a mapping between an event and an action;

- processing a trade using said logic engine with said modified algorithm; and
- using the second sub-interface to review details of orders executed by the logic engine.

13 (canceled)

14. An interface used in a computerized trading system, said interface comprising:

a first sub-interface for modifying an algorithm by changing a mapping between an event and an action, said algorithm used in said computerized trading system to implement a trading strategy; and

a second sub-interface for reviewing details of orders executed by the computerized trading system;

wherein said interface allows a user to navigate among said first and second sub-interfaces.

15. (canceled)

16. The interface of claim 14 wherein said interface comprises a graphical user interface.

17. The apparatus of claim 1, wherein the trading strategy is selected from the group consisting of:

- (a) a Volume-Weighted-Average-Price strategy;
- (b) a Ratio strategy;
- (c) a Gamma Hedge strategy;
- (d) an Iceberg strategy; and
- (e) a CB Delta Hedge strategy.

18. The apparatus of claim 1, wherein the first sub-interface includes an event editor interface, a condition editor interface and an action editor interface.

19. The method of claim 12, wherein said interface also includes a third sub-interface, and the method further comprising:

using said third sub-interface to monitor operation of a server computer which executes the logic engine.

20. The method of claim 12, wherein the trading strategy is selected from the group consisting of:

- (a) a Volume-Weighted-Average-Price strategy;
- (b) a Ratio strategy;
- (c) a Gamma Hedge strategy;
- (d) an Iceberg strategy; and
- (e) a CB Delta Hedge strategy.

21. The method of claim 12, wherein the first sub-interface includes an event editor interface, a condition editor interface and an action editor interface.

22. The interface of claim 14, wherein:

said interface also includes a third sub-interface for monitoring operation of the trading system; and

said interface allows a user to navigate among said first, second and third sub-interfaces.

23. The interface of claim 14, wherein the trading strategy is selected from the group consisting of:

- (a) a Volume-Weighted-Average-Price strategy;
- (b) a Ratio strategy;
- (c) a Gamma Hedge strategy;
- (d) an Iceberg strategy; and
- (e) a CB Delta Hedge strategy.

24. The interface of claim 14, wherein the first sub-interface includes an event editor interface, a condition editor interface and an action editor interface.

25. The apparatus of claim 1, wherein said action is placement of a securities trading order.

26. The method of claim 12, wherein said action is placement of a securities trading order.

27. The interface of claim 14, wherein said action is placement of a securities trading order.

APPENDIX B - EVIDENCE

No evidence is being submitted with this Appeal Brief (*i.e.*, this appendix is empty).

APPENDIX C - RELATED PROCEEDINGS

No prior or pending appeals, interferences, or judicial proceedings are known to Applicants, Applicants' legal representative, or assignee, which may be related to, directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal. Therefore, there are no copies of decisions rendered by a court or the Board to attach (*i.e.*, this appendix is empty).